

shape, wherein the chamber collects effluent gases from at least one of an anode chamber and a cathode chamber of a fuel cell.

3. (currently amended) A fuel cell system comprising:

a housing defining an anode chamber and a cathode chamber and including a catalyst, a protonically conductive but substantially electronically non-conductive membrane positioned between said anode chamber and said cathode chamber;

~~a mixing pump;~~

~~a fuel chamber in fluid communication with said mixing pump;~~

~~a first conduit having a first end connected to said anode chamber and a second end connected to said mixing pump, said first conduit for directing a fuel-water solution from said mixing pump to said anode chamber;~~


~~a second conduit having a first end in communication with at least one of said anode chamber and said cathode chamber and a second end connected to said mixing pump, said second conduit for directing effluent from at least one of said anode chamber and said cathode chamber to said mixing pump;~~  
and

a coalescing surface for collecting effluent gas from said effluent received from at least one of said anode chamber and said cathode chamber via said conduit.

4. (currently amended) The apparatus according to claim 3, wherein said coalescing surface is provided on a portion of a wall of said ~~second~~ conduit, for collecting effluent gas from said effluent received from said anode chamber and/or said cathode chamber.

5. (currently amended) The apparatus according to claim 3, wherein said coalescing

surface is provided on a portion of a wall of said ~~first~~ conduit, for collecting effluent gas from said effluent received from said cathode chamber.

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6. (original) The apparatus according to claim 3, wherein said coalescing surface includes a vaulted shape.
  7. (currently amended) The fuel cell system according to claim 6 ~~4~~, wherein said vaulted shape includes a dome.
  8. (currently amended) The fuel cell system according to claim 3, wherein said ~~second~~ conduit includes ~~an outlet a vent~~ provided adjacent said coalescing surface.
  9. (currently amended) The fuel cell system according to claim 5, wherein said ~~second~~ conduit includes ~~an outlet a vent~~ provided adjacent said coalescing surface.
  10. (currently amended) The fuel cell system according to claims 8 or 9, wherein said ~~outlet vent~~ includes a first opening positioned at a base of said coalescing surface and a second opening provided above an uppermost portion of said coalescing surface.
  11. (original) The fuel cell system according to claim 3, wherein said system is used in conjunction with a bipolar stack.
  12. (original) The fuel cell system according to claim 3, wherein said system is used in conjunction with a plurality of protonically conductive membranes.
  13. (original) The fuel cell system according to claim 12, wherein said plurality of protonically conductive membranes are assembled substantially in a single plane.
  14. (currently amended) The fuel cell system according to claim 3, wherein said coalescing surface is provided in a coalescing chamber, said chamber placed in-line with ~~said a~~ conduit.
  15. (original) The fuel cell system according to claim 3, wherein said coalescing

surface is provided on a surface of at least one of said anode chamber and said cathode chamber.

16. (currently amended) A method for separating gas from effluent produced in an anode or a cathode chamber of a fuel cell system, said system comprising:

a housing defining an anode chamber and a cathode chamber and including a catalyst, a protonically conductive but electronically non-conductive membrane positioned between said anode chamber and said cathode chamber; and

~~a fuel chamber for providing fuel to a fuel mixture for supplying said anode chamber;~~

~~a mixing chamber in fluid communication with said fuel chamber, said mixing chamber for mixing fuel received from said fuel chamber and water to form a fuel mixture for supplying to said anode chamber;~~

~~a conduit having a first end connected to one of said anode chamber and said cathode chamber and a second end connected to said mixing chamber, said conduit for directing effluent produced in said respective chamber to said mixing chamber; and~~

a coalescing surface in communication with at least one of said anode chamber and said cathode chamber for collecting effluent gas from effluent produced in said fuel cell;

said method comprising:

passing effluent produced in said fuel cell adjacent said coalescing surface;  
and

collecting gas via said coalescing surface from said effluent adjacent said

coalescing surface.

17. (currently amended) The method according to claim 16, further comprising venting said collected gas when a volume of said collected gas reaches a predetermined amount, said collected gas being vented through ~~an outlet a vent~~ provided adjacent said coalescing surface.

18. (currently amended) A fuel cell system comprising:

a housing defining an anode chamber and a cathode chamber and including a catalyst, a protonically conductive but electronically non-conductive membrane positioned between said anode chamber and said cathode chamber;

~~a mixing chamber;~~

~~a fuel chamber in fluid communication with said mixing chamber;~~

~~a first conduit having a first end connected to said anode chamber and a second end connected to said mixing chamber, said first conduit for directing a fuel-water solution from said mixing chamber to said anode chamber;~~

~~a second conduit having a first end connected to said anode chamber and a second end connected to said mixing chamber, said second conduit for directing effluent from said anode chamber to said mixing chamber;~~

a first coalescing chamber containing a first coalescing surface for collecting effluent gas from said effluent received from said anode chamber; and

a second coalescing chamber including a second coalescing surface for collecting effluent gas from said effluent received from said cathode chamber;

~~a first vent provided adjacent said first coalescing surface, and~~

~~a second vent provided adjacent said second coalescing surface.~~

19. (new) The method according to claim 17, wherein the vented gas is used to transport a fluid.
20. (new) The method according to claim 19, wherein said fluid comprises effluent.
21. (new) A method for moving a fluid in a fuel cell system comprising:
- providing a fuel cell comprising a housing defining an anode chamber and a cathode chamber and including a catalyst, a protonically conductive but substantially electronically non-conductive membrane positioned between said anode chamber and said cathode chamber;
- providing a coalescing chamber in communication with at least one of said anode chamber and said cathode chamber for receiving effluent therefrom, wherein said coalescing chamber includes a coalescing surface for collecting gaseous effluent from said effluent;
- collecting gaseous effluent in said coalescing chamber;
- transporting a fluid using said gaseous effluent collected by said coalescing chamber.
22. (new) The method according to claim 21, wherein said liquid comprises effluent.
23. (new) The method according to claim 21, wherein the fluid is transported proportionately with respect to the amount of gaseous effluent collected.
24. (new) A self-driven pump for moving a fluid in a fuel cell system comprising:
- a first chamber including:

an inlet for receiving effluent from either or both of